WHAT IS CLAIMED IS:

1. Pressure sensor comprising:

a casing having a pressure detection chamber;

a diaphragm for receiving pressure of a measuring object and disposed on the casing; and

a pressure detection element for detecting the pressure,

wherein the pressure detection chamber is filled with liquid, and the diaphragm contacts the liquid,

wherein the pressure detection element is disposed in the pressure detection chamber to receive the pressure of the liquid,

wherein the diaphragm has a plate shape with a radius of R and includes a circumference and a center of the plate, the circumference being fixed to the casing,

wherein the diaphragm further includes a corrugate disposed concentrically with the center of the diaphragm and having a half circular cross-section and a top of the half circle, and

wherein the top of the corrugate is disposed within a distance of 0.6R from the center of the diaphragm.

2. The pressure sensor according to claim 1,

wherein the top of the corrugate is disposed within a distance of 0.5R from the center of the diaphragm.

3. The pressure sensor according to claim 1,

wherein the top of the corrugate is disposed at a distance of 0.5R from the center of the diaphragm.

4. The pressure sensor according to claim 1,

wherein the radius of the diaphragm is equal to or smaller than 6mm.

5. Pressure sensor comprising:

a casing having a pressure detection chamber filled with liquid;

a diaphragm for receiving pressure of a measuring object and for covering the pressure detection chamber to seal the liquid; and

a pressure detection element disposed in the pressure detection chamber for detecting the pressure of the liquid,

wherein the diaphragm includes a corrugate with a top thereof, and

wherein the top of the corrugate is disposed within a predetermined distance from a center of the diaphragm.

6. The pressure sensor according to claim 5,

wherein the diaphragm has a plate shape with a radius of R,

wherein the corrugate disposed concentrically with the center of the diaphragm, and

wherein the top of the corrugate is disposed within a distance of 0.6R from the center of the diaphragm.

7. The pressure sensor according to claim 6,

wherein the diaphragm includes a circumference fixed to the casing,

wherein the corrugate has a half circle cross-section, and wherein the top of the corrugate is disposed within a distance of 0.5R from the center of the diaphragm.

8. The pressure sensor according to claim 7,

wherein the diaphragm is made of metallic material, and

wherein the corrugate is disposed on the opposite side of the liquid.

9. The pressure sensor according to claim 8,

wherein the radius of the diaphragm is equal to or smaller than 6mm.